MeetHub

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Abstract - Real-time communication (RTC) is a new standard and industry-wide effort that expand the web browsing model, allowing access to information in areas like social media, chat, video conferencing, and television over the internet, and unified communication.

These systems users can view, record, remark, or edit video and audio content flows using time-critical cloud infrastructures that enforce the quality of services. However, there are many proprietary protocols and codecs available that are not easily interoperable and scalable to implement multipoint video-conference systems. WebRTC (Web Real-Time Communication) is a State-of-the-Art open technology that makes real-time communication capabilities in audio, video, and data transmission possible in real-time communication through web browsers using JavaScript APIs (Application Programming Interfaces) without plug-ins. This paper aims to introduce the P2P video conferencing system based on Web Real-Time Communication (WebRTC). In this paper, we have proposed a web-based peer-to-peer real-time communication system using the Mozilla Firefox together with the ScaleDrone service that enables users to communicate with high-speed data transmission over the communication channel using WebRTC technology, HTML5 and use Node.js server address. Our experiments show that WebRTC is a capable building block for scalable live video conferencing within a web browser. We also study a thermal camera for the videoconference system to identify the temperature body results regarding the COVID 19 crisis.

Key Words: Deep learning, Web-RTC, peer-to-peer, Real Time Communication, video conference

1.INTRODUCTION

Instant messaging and other text-based communication media paved the way for improved human interactions where users can exchange messages from any location in the world at any time within seconds.

Video chatting has taken this paradigm shift to another level. With real-time audio and video chat between users, there have been fewer IT ideas that can rival the applications and convenience provided by the video chat technology.

Furthermore, with the pandemic suggesting social distancing as the major safety precaution, the best way to stay in touch with your contacts right now is through a video conference, which proved to be the optimal solution not just when staying home but collaborating remotely as well.

The spike of interest to video calling apps resulted in immense success and dramatic increase of the revenues for those who focused on designing video calling apps for Android and iPhone.

2. Problem Statement:

During recent years, due to technological advancements many sophisticated techniques have been evolved.
This project to create video chat application with a great feature like attaching files in ChatBox while meeting is live.so we are designing the video conference plus chatting app for different types of purposes like meetings, education, healthcare etc.

3. Proposed Methodology:

With WebRTC, you can add real-time communication capabilities to your application that works on top of an open standard. It supports video, voice, and generic data to be sent between peers, allowing developers to build powerful voice- and video-communication solutions.
The technology is available on all modern browsers as well as on native clients for all major platforms. The technologies behind WebRTC are implemented as an open web standard and available as regular JavaScript APIs in all major browsers. For native clients, like Android and iOS applications, a library is available that provides the same functionality. The WebRTC project is open-source and supported by Apple, Google, Microsoft and Mozilla, amongst others.

4. Literature Survey

(Ramesh, et al, 2003). EMS are part of the broader field of Collaborative Internet Systems that encompasses the use of computers and Web technologies to support coordinates and cooperates of two or more people attempting to perform a task or solve a problem.

The Internet's heterogeneity makes multi-points communication design a difficult problem. The receiver based rate adaption struggles to solve this problem. The objectives is to broadcast a live signal from any particular sender to an arbitrary large set of receivers along paths with potentially high variability in bandwidth (McCanne, et al, 1996).

EMS solutions range from sophisticated executive meeting suites for immersive experience to simple computer to computer solutions. A server hosting the meeting is often involved; it can be hosted on the Internet or into a local network (for local sessions) (Aguilar, et al, 1986). The client can be regular computer (or a mobile handset) with audio and video capture devices for audio/video

5. Results

Room Create Section:
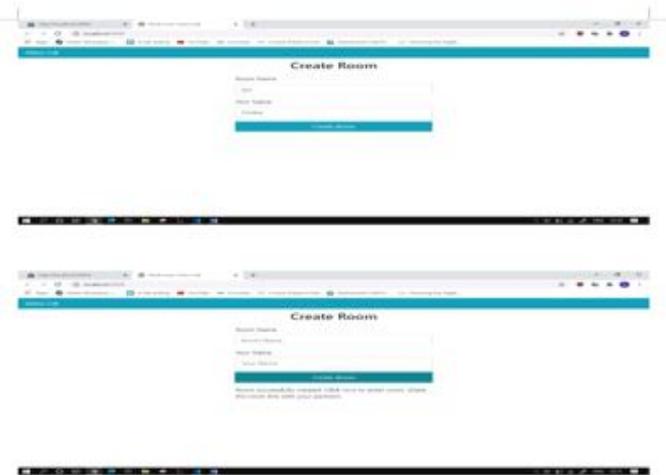
Conference Section:
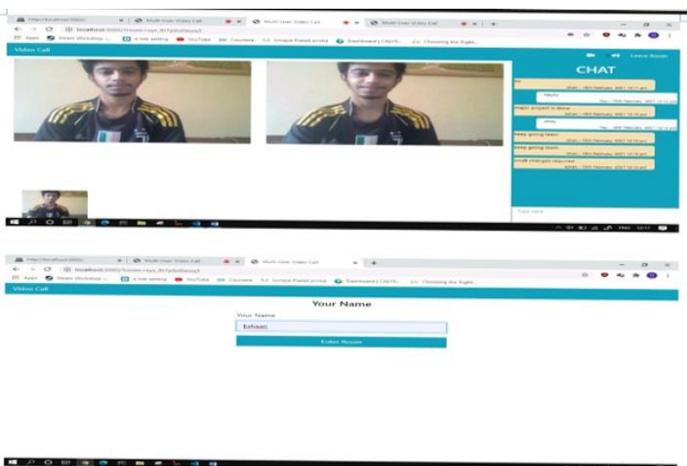
Chat Section:

6. Need of Project:

We know that a lot of video chat application are there. We use zoom (china). Webex (USA) and a lot. So it is good opportunity for building app and its help in make in India. Well, now you know these incredible numbers on video call usage for the last time. And you might ask why you need to consider your own video chat application development when there are plenty of competitors in this market.

However building the right product and promoting it for the targeted audience, Besides, there are sustainable benefits of building a video call app for business own usage instead of paying price for using some existing solutions.

New Business Opportunity

For most offline business their own video call app means the way to reach new audience and   expand their services over other locations.

7. Conclusion

Video calls have become an integral part of today's communication with over 175% increase in regular live video usage among millennials in just the last 3 years under TokBox data. Thus video chat apps are hiking in its popularity with incremental speed as for businesses as well as for personal usage.

Moreover, as about nosiness usage of video conferencing, according to a survey of 2019 responding said they could report an increase in cloud-based video conferencing application needs. These starts are telling. Video call app.

GitHub w3c/webrtc-pc

REFERENCES

1.A.E. Shukhman, I.P. Bolodurina, P.N. Polezhaev, Y.A. Ushakov and L.V. Legashev, "Adaptive technology to support talented secondary school students with the educational IT infrastructure", proc. of IEEE Global Engineering Education Conference (EDUCON), pp. 993-998, 2018.

2.A.E. Shukhman, P.N. Polezhaev, L.V. Legashev, Y.A. Ushakov and I.P. Bolodurina, "Creation of regional center for shared access to educational software based on cloud technology", proc. of of IEEE Global Engineering Education Conference (EDUCON), pp. 916-919, 2017.

3.Web Conferencing Software, 2019, [online] Available: https://www.capterra.com/web-conferencing-software/.

4.S. Taheri, L.A. Beni, A.V. Veidenbaum, A. Nicolau, R. Cammarota, J. Qiu, et al., "WebRTCBench: a benchmark for performance assessment of WebRTC implementations", 13th IEEE Symposium on Embedded Systems For Real-time Multimedia, 2015.

5. Janus Gateway documentation, 2019, [online] Available: https://janus.conf.meetecho.com/.

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